

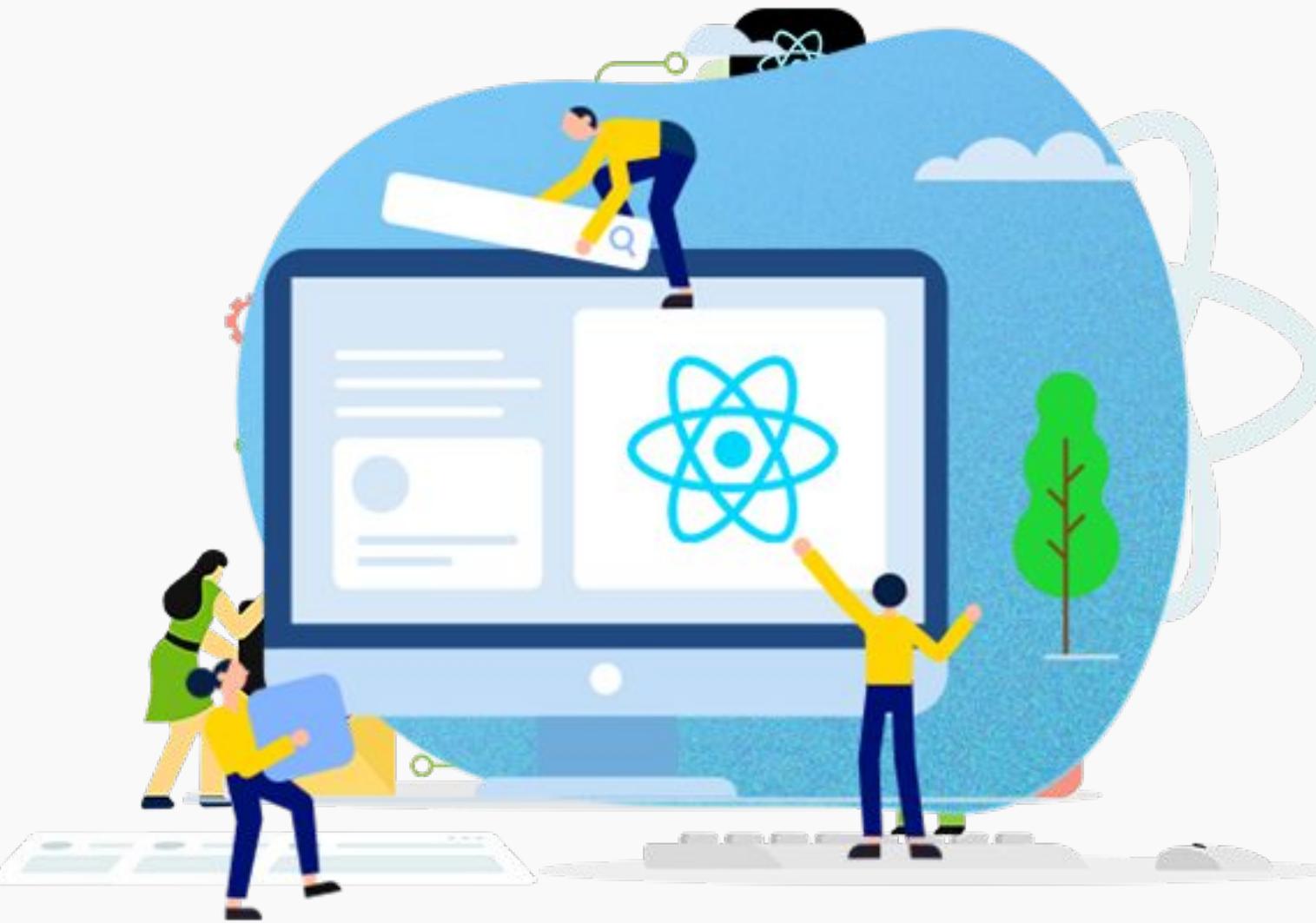
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Learning 3

Introduction

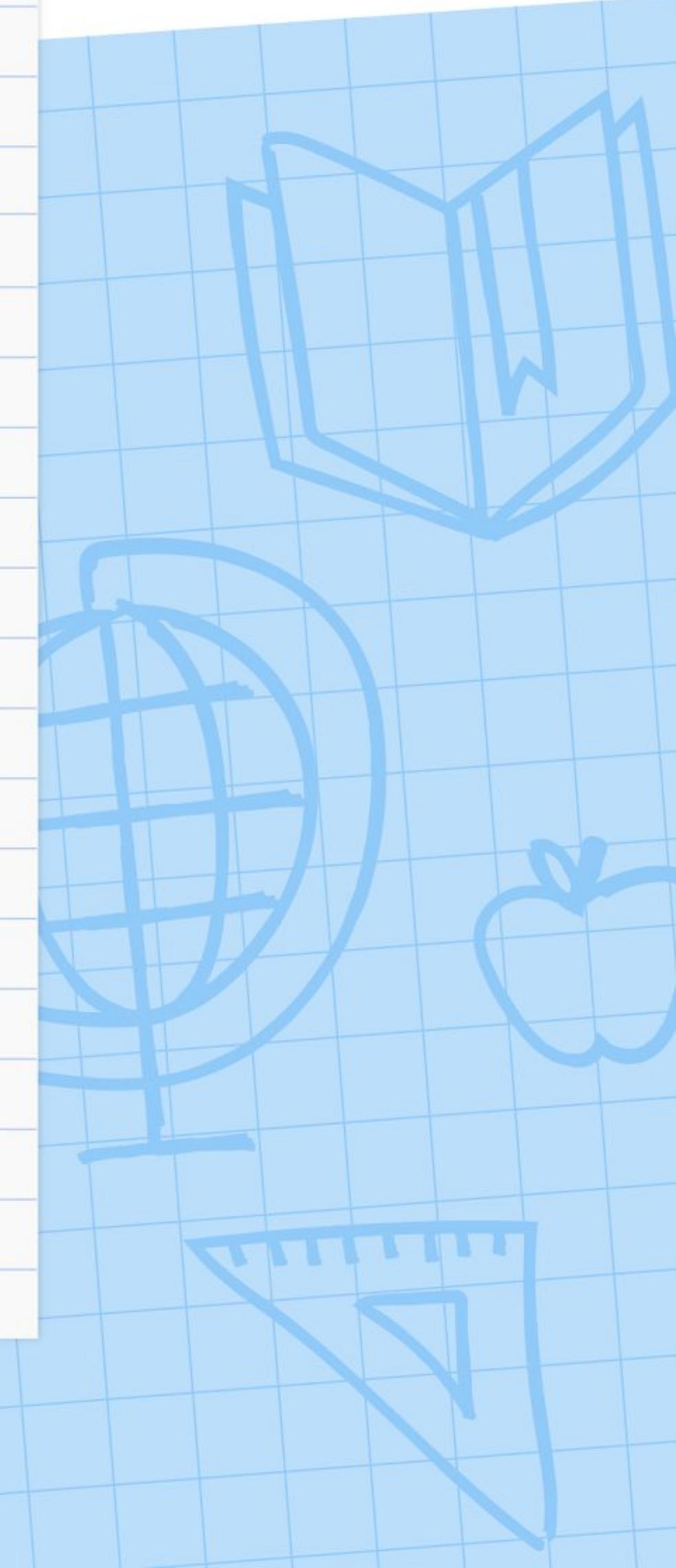
to React JS

Build UI with components



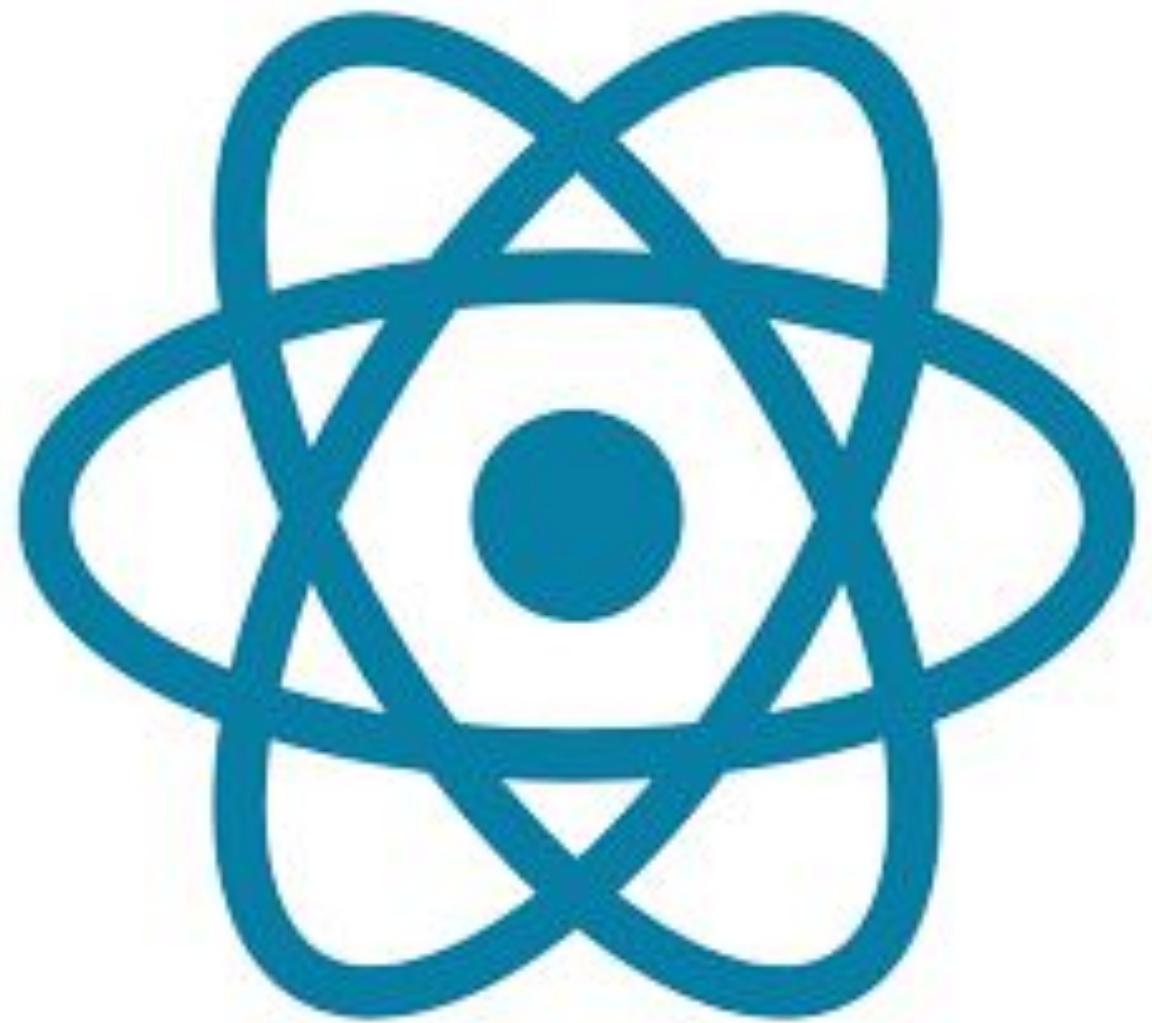
```
const filterByOrg = study => study.lead_organization === filterByOrg;
const filterStatus = filterByStatus ? study.status === filterByStatus : true;
const filterPatchStatus = patchStatus ? study.patch_status === patchStatus : true;
```

```
function filterStudies({ studies, filterByOrg = null, filterByStatus = null, filterPatchStatus = null }) {
  return studies.filter(study => filterByOrg(study) && filterStatus(study) && filterPatchStatus(study));
}
```



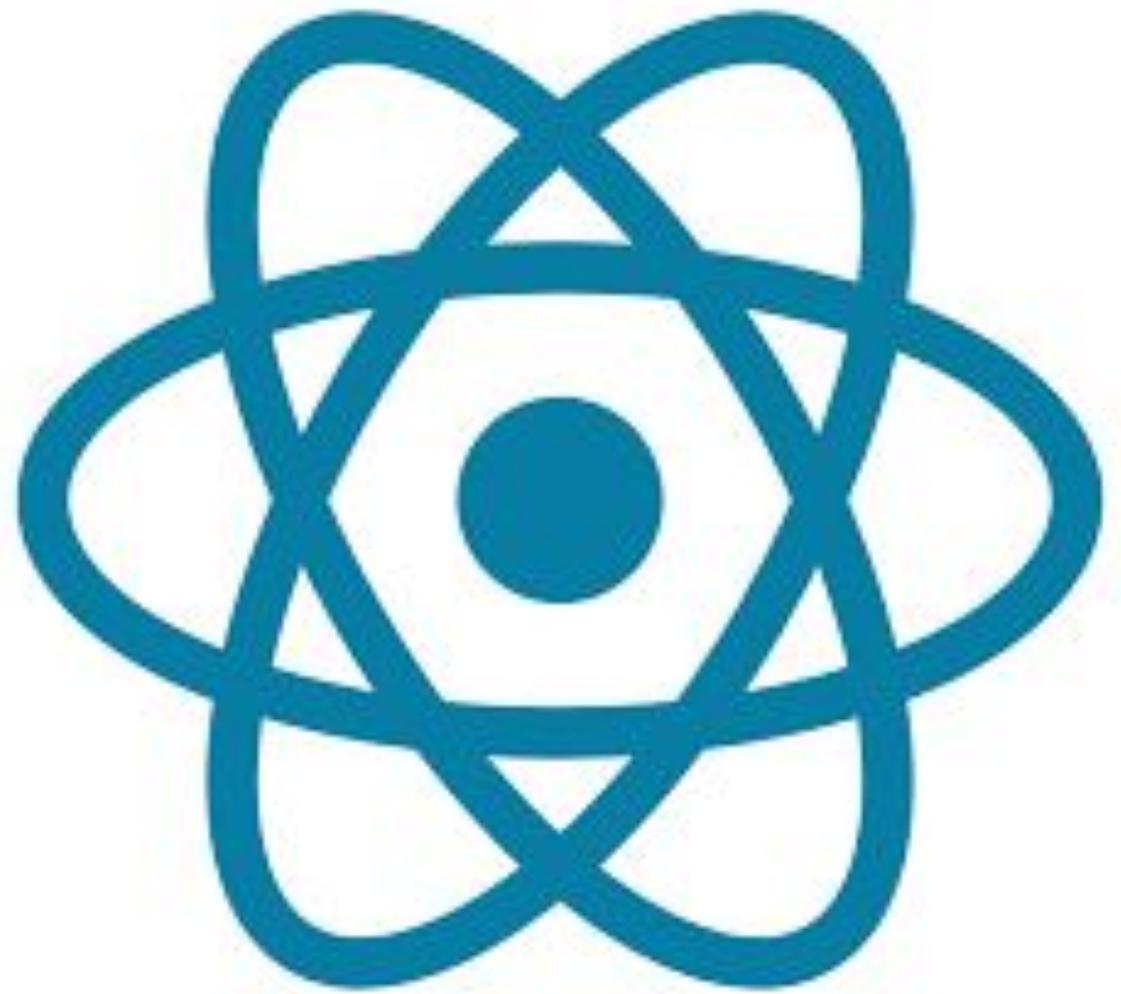
What is React JS

- Library JavaScript untuk membangun UI
- Berbasis components
- Declarative UI



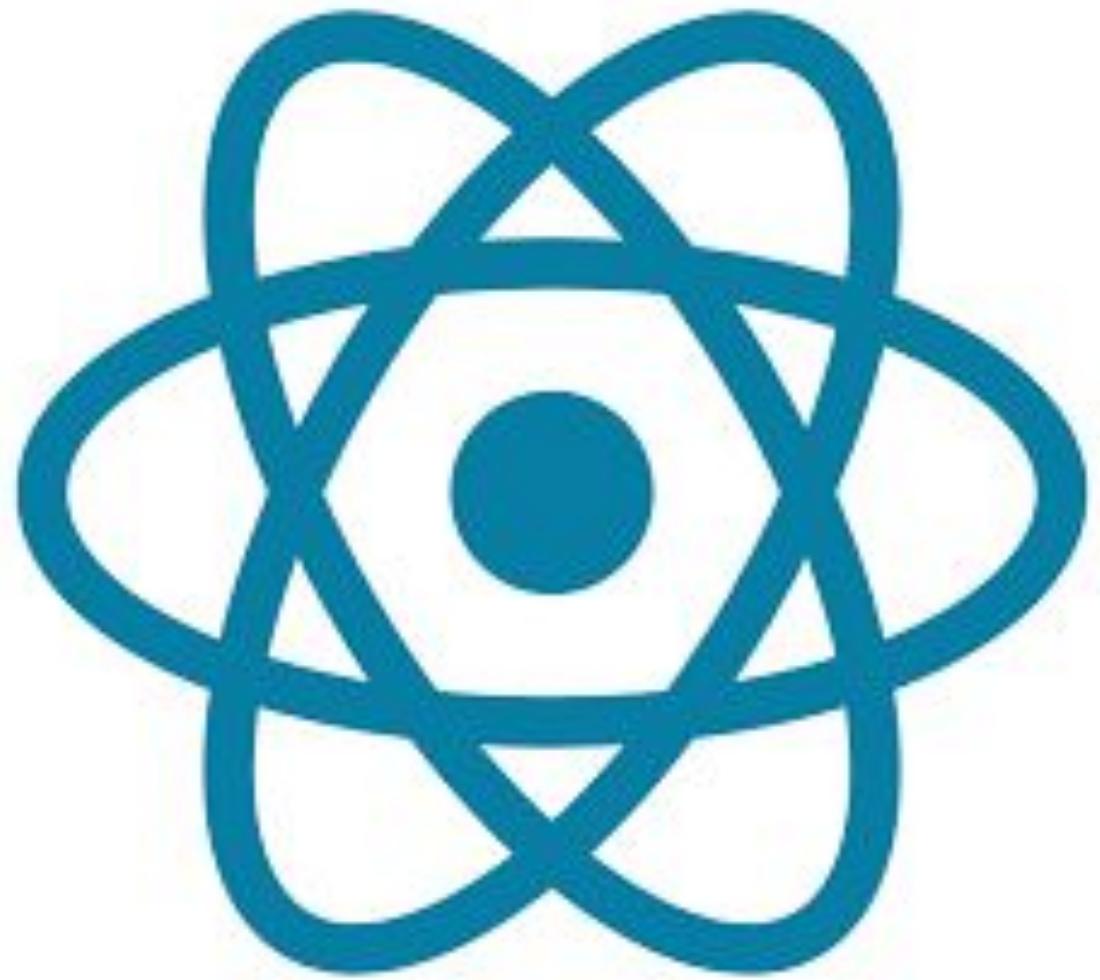
SPA Concept

- Single Page Application
- Satu halaman *HTML*
- Konten berubah tanpa reload



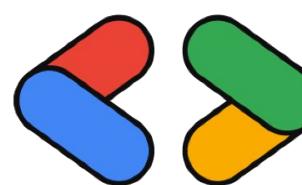
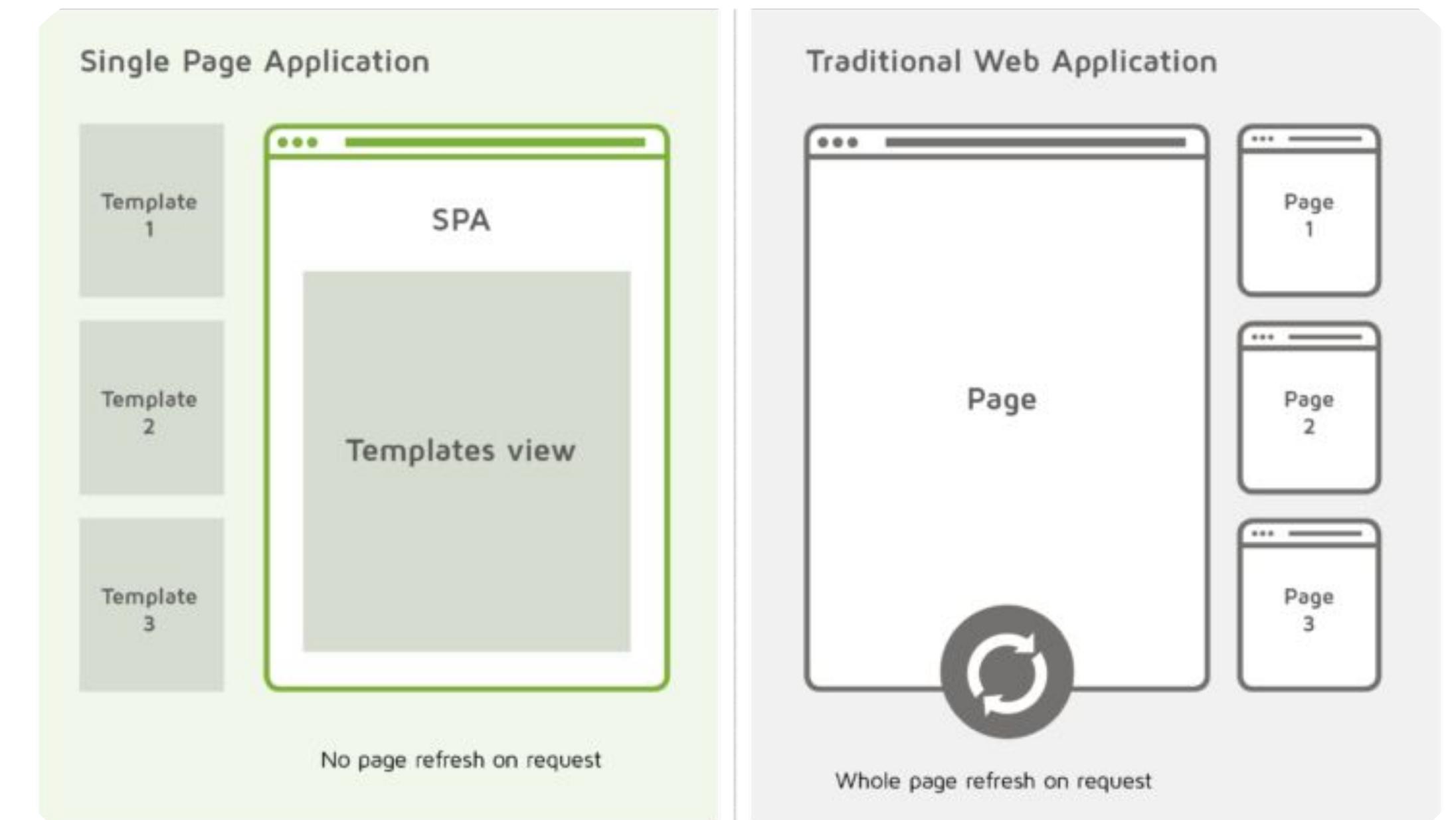
Setup React Project

- Node.js terinstall
- Package Manager (NPM)
- Tooling (Vite)



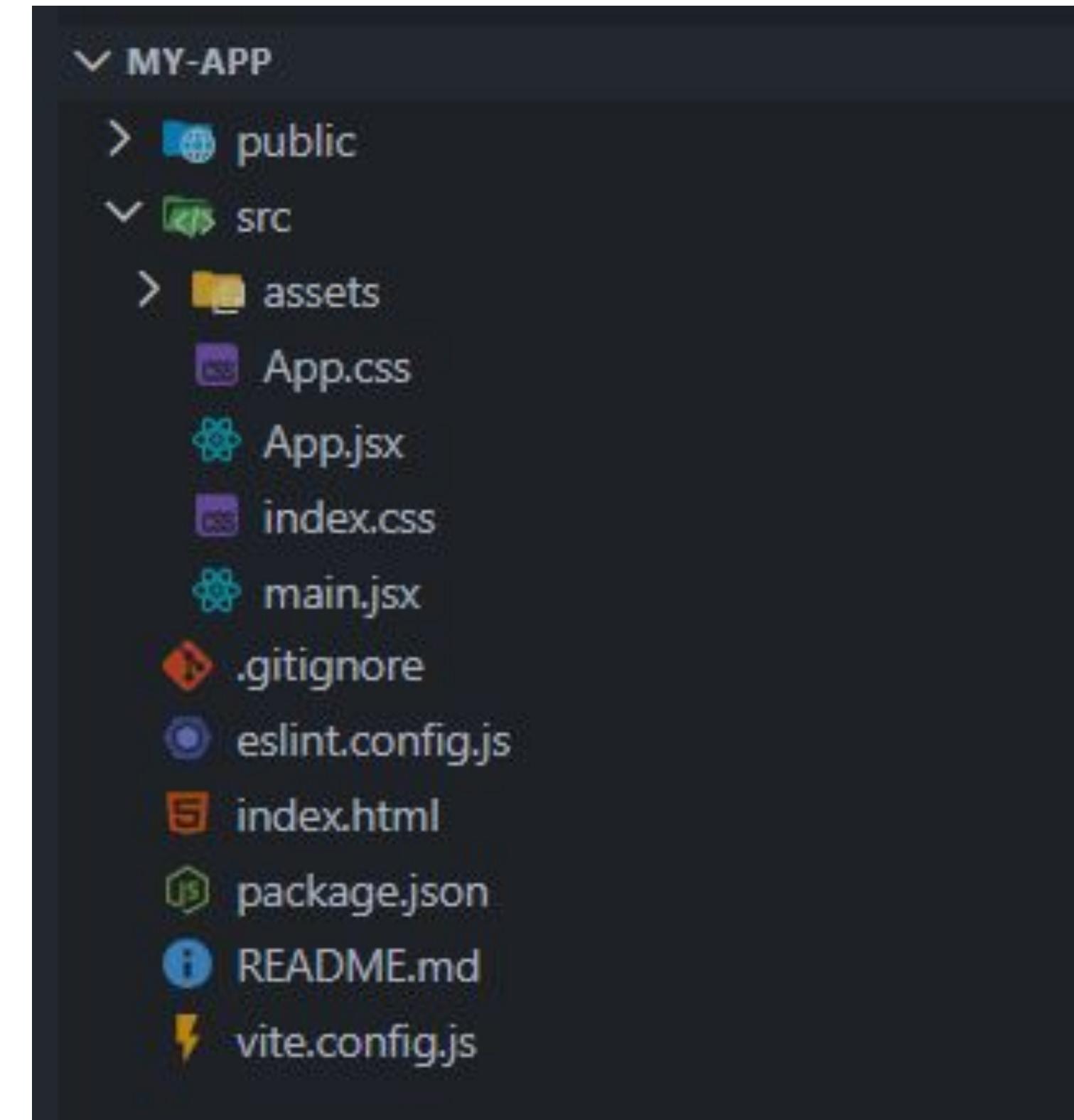
SPA Concept

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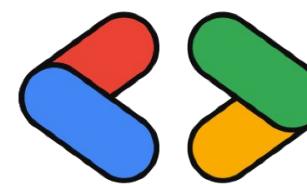
React Project Structure

- *index.html* → container
- *src/* → dapur utama
- *main.jsx* → entry point react
- *app.jsx* → komponen utama



JSX

- JavaScript Syntax Extension
- Mirip HTML di dalam JavaScript
- Digunakan untuk mendeskripsikan UI

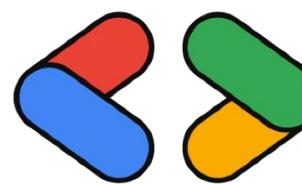


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JSX Rules

- Harus punya satu parent
- Gunakan *className* untuk styling
- Bisa pakai JavaScript expression

```
function Profile() {  
  const nama = "Ello";  
  return (  
    <div>  
      <h1 className="judul">Halo, {nama}!</h1>  
    </div>  
  );  
}
```



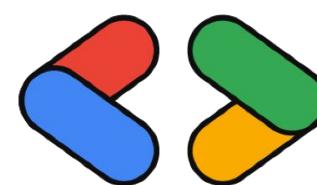
Component Concept

- Komponen → bagian UI
- Berupa function
- Mengembalikan JSX

```
function Header() {  
  return <h1>Header</h1>  
}
```

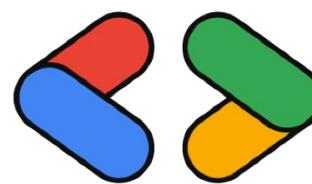
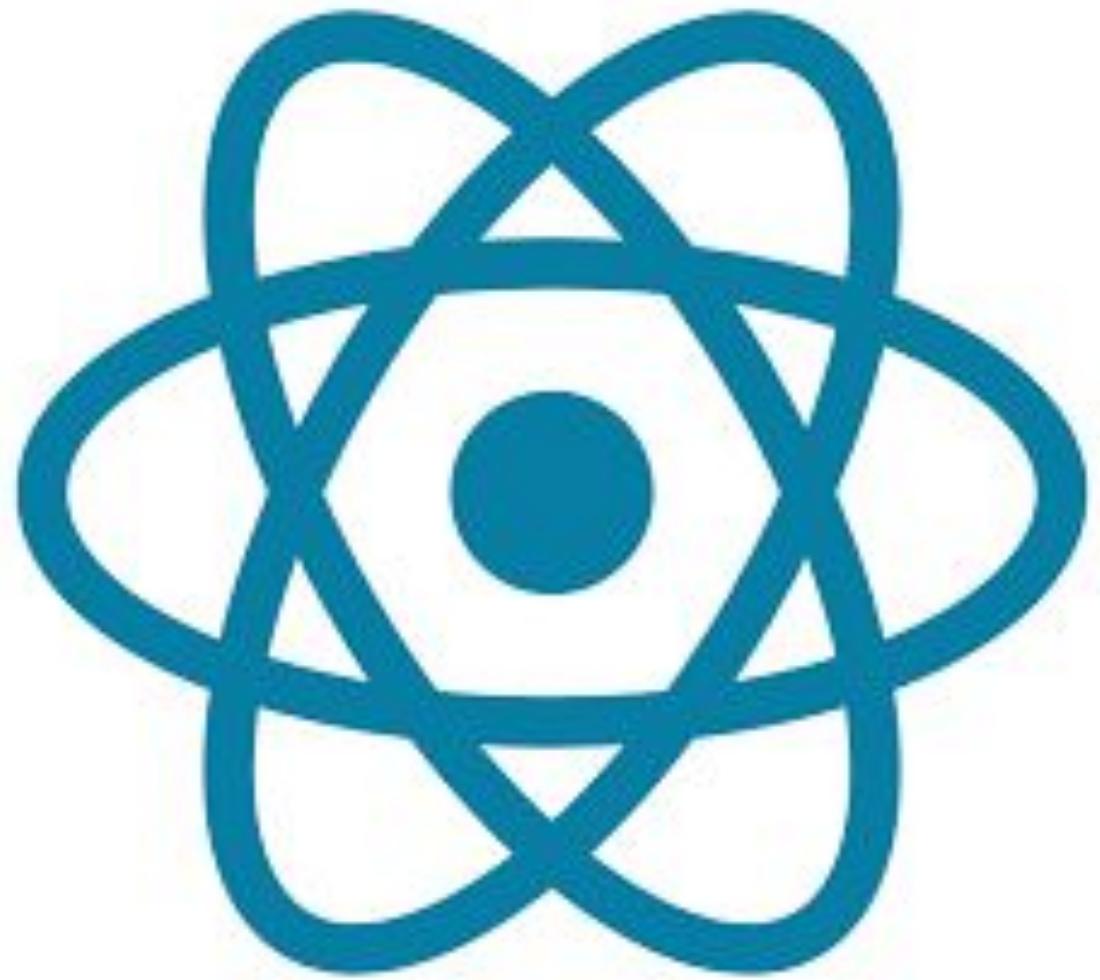
Using Component

```
function App() {  
  return <Header />  
}
```



How React Renders UI

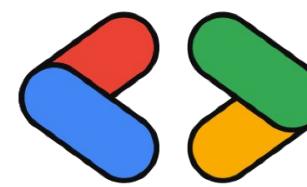
- UI berdasarkan data
- React me-render ulang saat data berubah
- Fokus ke hasil, bukan proses



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Initialize & Run Project

```
npm create vite@latest project-name  
npm install  
npm run dev
```

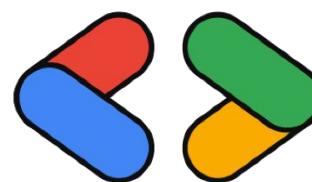


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Let's Code



[React Docs](#)

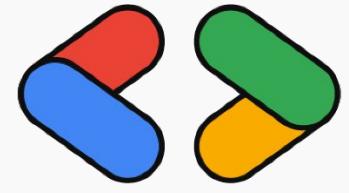


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Challenge! (FE Member Only*)

1. Migrasikan tugas Tailwind CSS pertemuan sebelumnya menggunakan React JS
2. implementasikan penggunaan *components*
3. Kerjakan di repository github masing-masing
4. Lakukan pull request ke [Frontend Development GDGoC UNSRI 25/26](#) untuk memasukkan link repo github anda di folder /3-introduction-to-react/task.txt

Selamat Mencoba ~



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Thank You !

```
filterByOrg = filterByOrg ? study.team_organization === filterByOrg : true
filterStatus = filterByStatus ? study.status === filterByStatus : true
filterPatchStatus = filterPatchStatus ? study.patch_status === filterPatchStatus : true

function filterStudies({ studies, filterByOrg = true, filterStatus = true, filterPatchStatus = true }) {
  return studies.filter(study => filterByOrg && filterStatus && filterPatchStatus)
}
```

